

OEM Remanufactured DPF Program





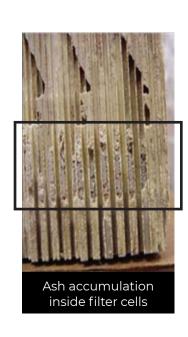
OEM Remanufactured DPF Program

Understanding ash vs. soot

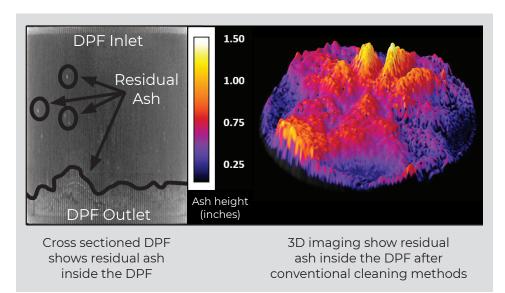
- ► Ash and soot are different types of particulate matter that accumulate inside the DPF
- ▶ Removing ash vs. soot requires different processes
 - Soot is removed from the DPF through regeneration events that occur during normal vehicle operation
 - These regeneration events burn off accumulated soot, leaving behind ash
 - Unlike soot, ash is non-combustible and cannot be burned off during vehicle operation. As a result, ash accumulates inside the DPF.

Ash accumulation and DPF service intervals

- ► A diesel particulate filter is just that a filter!
- Like all filters, preventative maintenance is recommended for the overall performance, health and longevity of the greater system
- Over a normal service interval, ash accumulation inside the DPF can exceed 1.5 pounds!
 - When the DPF becomes ash loaded, the DPF must be removed from the vehicle to be serviced



Residual ash remains after in-field cleaning



Consequences of reinstalling a partially cleaned DPF:

- ▶ Premature maintenance is likely, reducing vehicle uptime
- ► Residual ash leads to additional back pressure, limiting engine performance and fuel economy
- ► Increased wear and tear on expensive engine and emissions system components
- ► Ash creates hot spots in the ceramic substrate that leads to substrate cracks and expensive catastrophic failure

The competition

In-field cleaning

- ► In recent years, cleaning equipment has been developed and sold to the market to provide in-field cleaning services
- ▶ There are 2 primary cleaning methods:
 - **Pneumatic (air)** cleaning methods use pressurized air to blow ash out of the unit
 - Aqueous (water) cleaning methods use pressurized water to blow ash out of the unit

In-field cleaning limitations

- ▶ OEM test results (table below) have proven that in-field cleaning equipment does not adequately clean the filter back to like new condition. On average;
 - \cdot 55% of ash remains in the filter using pneumatic cleaning methods
 - 25% of ash remains in the filter using aqueous cleaning methods

Alliant Power: the superior alternative

OEM approved remanufacturing process

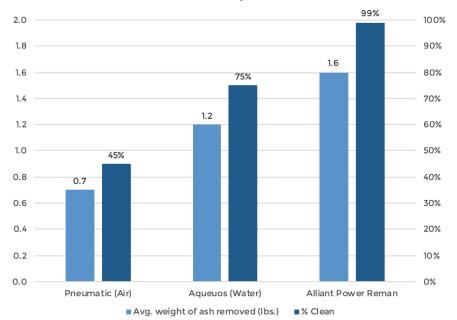
- ▶ Patented multi-step process ensures filters will perform like new
- ► Process removes on average nearly a **full pound more than local cleaning!**
- ► All units 100% end of line tested to meet a standard of quality accepted by OEM engineering

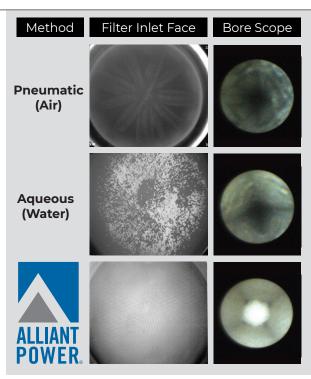
Customer benefits

- ► Increased vehicle uptime:
 - Reman exchange units get customers back on the road quickly eliminating wait time for a unit to be cleaned
 - \cdot Maximized service interval, twice that of the local clean
- Optimized filter performance leading to increased fuel economy
- ► Reduced maintenance costs

Remanufactured vs. in-field cleaned comparison

Our OEM partner is constantly benchmarking against the competition. The information to the right is an average across 100 in-field cleaned DPFs when compared to Alliant Power's remanufactured DPFs.





Application information		Alliant Power part numbers			OEM cross referencing		
Engine make	Engine models ⁸	Diesel particulate filter (DPF) ¹	DPF gasket ²	DPF clamp ³	Diesel particulate filter (DPF)	DPF gasket	DPF clamp
Cummins	ISX	AP70100	AP70300 (2)	AP70400 (2)	2871581RX	2871453	2871863
		AP70101			4388409		
		AP70102			5295609RX		
		AP70103			2871578RX		
		AP70104			5295604RX		
		AP70106			4388411		
	ISL, ISM	AP70105			4352923		
		AP70107			4352920		
	ISC	AP70108	AP70301 (2)	AP70401 (2)	4969838	2871452	2871862
	ISL	AP70125			2871463RX		
	ISX	AP70132			5295605RX		
	ISB	AP70109	AP70302 (2)	AP70402 (2)	4965287	2871451	2871861
		AP70124			2871462RX		
		AP70131			5295603RX		
Navistar	MaxxForce 7	AP70110 ⁴	AP70303 inlet (1) AP70304 outlet (1)	Not applicable	Call AP Technical for fit 4		I Not applicable I
	MaxxForce DT / 9 / 10	AP70111 ⁴			2593981C91, 5010836R91, 2604873C91, 5010847R1, 2594356C91, 5010834R91, 2611630C91, 5010852R1, 2594165C91, 5010830R91,	2593998C1 inlet 2593986C1 outlet	
		AP70128 ⁴					
	MaxxForce 7 / DT	AP70127 ⁴					
	MaxxForce DT / 9 / 10	AP70112 ⁴	AP70305 (2)	AP70403 (2)	2594131C91, 5010832R91, 2612521C91, 5010853R1, 2605837C1, 5010850R1, 2517331C91		2594128C1
		AP70129 ⁴				2594129C1	
	MaxxForce 7 / DT / 9 / 10	AP70130 ⁴					
	MaxxForce 13	AP70113 ⁷	AP70306 ⁷ tape (1)	AP70404 (2)	5010844R1, 2604823C9	2604051C91 tape	FLTXC138PS
	MaxxForce 11 / 13	AP70114 ⁷			5010845R1, 2604830C91		
Detroit Diesel	Series 60	AP70115	AP70307 (2)	AP70405 (2)	RA6804908692	A4709970045	A4709950002
	DD13, DD15, DD16	AP70116 ⁵	AP70308 ⁵ inlet (1)	AP70406 inlet (1)	RA0004903792	A6804910480 inlet	A6809950202 inlet
				AP70407 ^{5, 6} outlet (1)			A6809950302 outlet
Mercedes-Benz	MBE 4000, OM460, OM926	AP70117	AP70309 (2)	Not applicable	RA6804908792	A6804910180	Not applicable
Volvo, Mack	D13, MP8	AP70118	AP70310 (2)	AP70408 (2)	22810502	21212522	21212520
	D11, D13, D16	AP70119	AP70311 (2)	AP70409 (2)	21850658	21371339	21445458
	MP7	AP70120	AP70312 (2)	AP70410 (2)	20231111	21048511	21048521
	MP7, MP8, D11, D13	AP70126			22761989		
Caterpillar	C13, C15	AP70121	AP70313 (2)	AP70411 (2)	10R6089	278-5711	278-5712
	C9, C13, C15, C16	AP70122	AP70314 (2)	AP70412 (2)	10R6088	279-2123	279-2124
	C7	AP70123	AP70315 (2)	AP70413 (2)	10R6082	279-3259	279-3260

¹ Associated DPF inlet and outlet gaskets are included with DPF. Gaskets and clamps also available separately. See NPA 01/19.

 $Information is \ reference \ only. \ Contact \ Alliant \ Power \ Technical \ at \ 1.800.735.9775 \ to \ verify \ part \ application.$



AlliantPower.com

For pricing and availability contact your Authorized Service Dealer. APDPF_TF-0919_R1

² Alliant Power DPF gaskets are included with DPF and are also sold individually, see NPA 02/19. Quantity indicated in parentheses next to the part number is the required gaskets for that particular application. Gaskets fit inlet and outlet unless otherwise noted.

³ Alliant Power DPF clamps are sold individually and are not included with DPF, see NPA 02/19. Quantity indicated in parentheses next to the part number is the required clamps for that particular application. Clamps fit inlet and outlet unless otherwise noted.

⁴ Contact Alliant Power Technical at 1.800.735.9775 for assistance determining correct DPF. VIN and ECM calibration required. See APTB 01/19_R1.

⁵ AP70116 DPF includes AP70308 inlet gasket and AP70407 outlet clamp with incorporated gasket.

⁶ AP70407 outlet clamp includes the outlet gasket which is incorporated into the clamp.

⁷ AP70113 and AP70114 DPFs include AP70306 gasket tape.